

Application No.: 10/699,844

Docket No.: 2336-218

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (original) A 4-lead full-color light emitting device comprising:

first through third sub-lead frames respectively having first through third leads each made of a conductive material, and wire bonding pads each formed at one end of an associated one of the first through third leads;

a main lead frame having a fourth lead made of a conductive material, and a reflecting cup formed at one end of the fourth lead while having a side wall and a bottom surface, the reflecting cup being formed with a reflecting surface at an inner surface of the side wall while having, at the bottom surface, an insulating portion, and a non-insulating portion electrically connected to the fourth lead; and

first through third light emitting diodes (LEDs) of different light emitting wavelengths mounted on the bottom surface of the reflecting cup in the main lead frame, each of the LEDs having first and second electrodes of different characteristics;

wherein the first electrode of the first LED and the first electrode of the second LED are commonly electrically connected to the first lead of the first sub-lead frame;

wherein the second electrode of the second LED and the first electrode of the third LED are commonly electrically connected to the second lead of the second sub-lead frame;

wherein the second electrode of the first LED is electrically connected to the fourth lead of the main lead frame; and

wherein the second electrode of the third LED is electrically connected to the third lead of the third sub-lead frame.

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2. (currently amended) The 4-lead full-color light emitting device according to claim 1, wherein ~~the electrical connection of the second electrode of the first LED to the third lead of the main lead frame is achieved by die-bonding the second electrode of the first LED~~ is die-bonded to the bottom surface of the reflecting cup in the main lead frame ~~[[,]]~~ using a conductive bonding agent which realizes the electrical connection of the second electrode of the first LED to the fourth lead of the main lead frame.

3. (currently amended) The 4-lead full-color light emitting device according to claim 1, further comprising bonding wires electrically connecting ~~wherein the electrode-to-lead electrical connection of the first through third LEDs to the~~ respective ones of the first through third sub-lead frames is achieved in accordance with a wire bonding method.

4. (currently amended) The 4-lead full-color light emitting device according to claim 1, wherein ~~the mounting of the second and third LEDs to the main lead frame is achieved by die-bonding the second and third LEDs~~ are die-bonded to the bottom surface of the reflecting cup in the main lead frame ~~[[,]]~~ using a non-conductive bonding agent, thereby mounting the second and third LEDs on the main lead frame.

5. (original) The 4-lead full-color light emitting device according to claim 1, wherein the bottom surface of the reflecting cup in the main lead frame has a circular or oval shape.

6. (original) The 4-lead full-color light emitting device according to claim 1, wherein the first LED is adapted to emit light of a red wavelength, the second LED is adapted to emit light of a green wavelength, and the third LED is adapted to emit light of a blue wavelength.

7. (currently amended) A 4-lead full-color light emitting device comprising:
first through third light emitting diodes (LEDs) of different light emission wavelengths, each of the LEDs having first and second electrodes;

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a first lead electrically connected to ~~the~~ respective first electrodes of the first and second LEDs, and adapted to apply a first control voltage to the first electrodes of the first and second LEDs;

a second lead electrically connected to both the second electrode of the second LED and the first electrode of the third LED, and adapted to apply a second control voltage to the second electrode of the second LED and the first electrode of the third LED;

a third lead electrically connected to the second electrode of the third LED, and adapted to apply a third control voltage to the second electrode of the third LED; and

a fourth lead electrically connected to the second electrode of the first LED, and adapted to apply a fourth control voltage to the second electrode of the first LED.

8. (new) The 4-lead full-color light emitting device according to claim 7, wherein said third lead is different from said fourth lead.

9. (new) The 4-lead full-color light emitting device according to claim 8, wherein said third control voltage is different from said fourth control voltage.

10. (new) The 4-lead full-color light emitting device according to claim 7, wherein said third control voltage is different from said fourth control voltage.

11. (new) The 4-lead full-color light emitting device according to claim 7, wherein said third lead is not electrically connected to the second electrode of the first LED.

12. (new) The 4-lead full-color light emitting device according to claim 11, wherein said fourth lead is not electrically connected to the second electrode of the third LED.

13. (new) The 4-lead full-color light emitting device according to claim 7, wherein said fourth lead is not electrically connected to the second electrode of the third LED.

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14. (new) The 4-lead full-color light emitting device according to claim 7, wherein said first and third voltages are positive whereas said second and fourth voltages are negative; and

said third and fourth leads are adapted to simultaneously apply said third, positive control voltage to the second electrode of the third LED and said fourth, negative control voltage to the second electrode of the first LED, respectively.

15. (new) The 4-lead full-color light emitting device according to claim 7, wherein said first electrodes of the first and second LEDs and the second electrode of the third LED are anodes;

said second electrodes of the first and second LEDs and the first electrode of the third LED are cathodes; and

said first, second and third LEDs are configured to emit light of red, green and blue wavelengths, respectively.